



Cal OES

GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



 **NG 9-1-1 Discussion**
Northern APCO
February 10, 2022



Discussion Overview

- NG 9-1-1 Overview
- NG 9-1-1 Project Update
- Legacy CPE Update
- Cloud CPE Update
- NG 9-1-1 Alert & Warning Update
- HF Grant
- Questions and Discussion

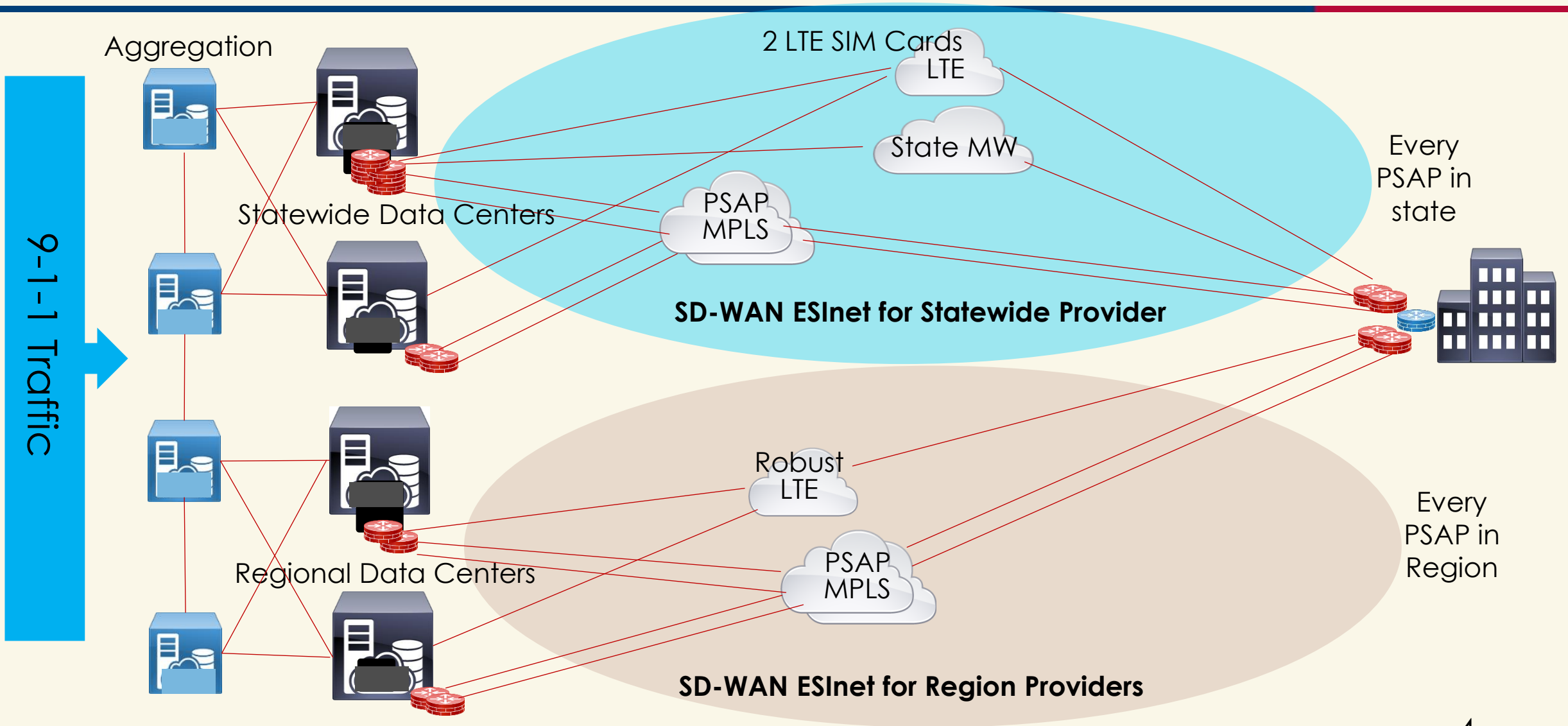


CA NG 9-1-1 Multi-Vendor Solution

- 449 PSAPs annual call volume of 27 Million 9-1-1 calls
- 100% PSAPS accepting wireless 9-1-1 calls & Text to 9-1-1
- Cal OES manages, procures, provides technical input for the entire system
- NG 9-1-1 system consists of regional NG 9-1-1 providers (Synergem, NGA 911, and Lumen) and a statewide (Atos) NG 9-1-1 provider connected to every PSAP
 - Over 4000 endpoints in the network
 - 100% NENA i3 compliant NG 9-1-1 deployment
 - Entire Network is IPv6 using SDWAN
 - Includes Private Key Infrastructure to implement PSAP Credentialing Agency certificates



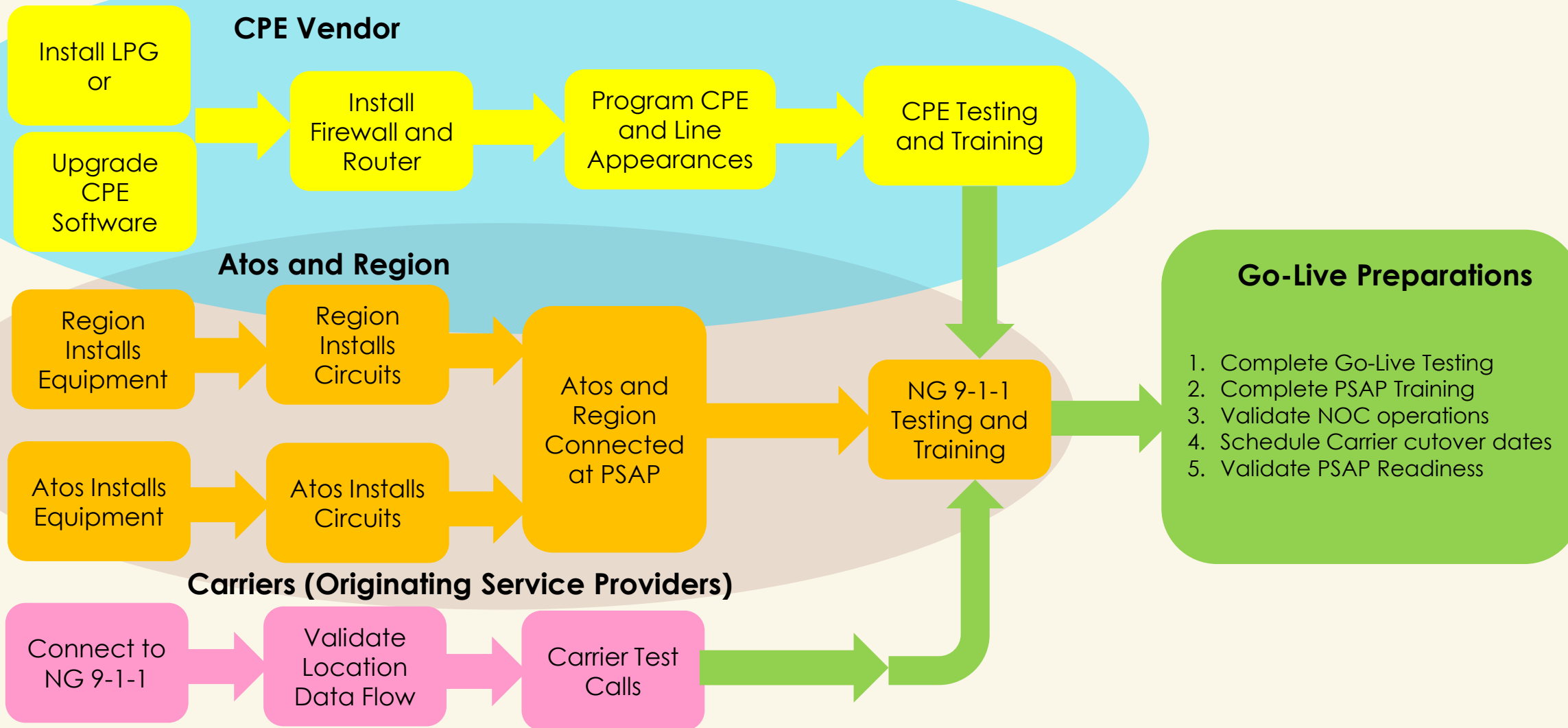
NG 9-1-1 Connectivity





PSAP Installs

Preparing for NG 9-1-1 Go-Live





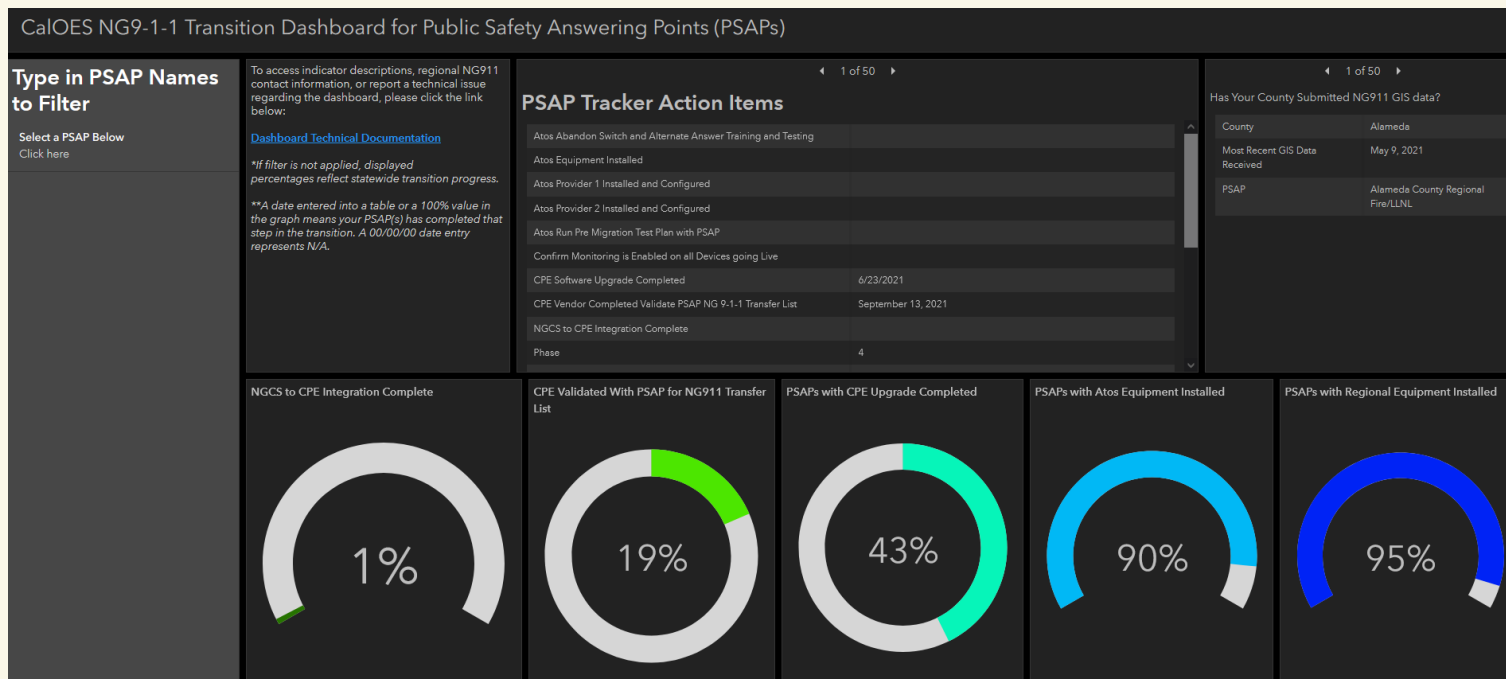
PSAP Install Status

- NG911 Deployment PSAP Dashboard Technical Information

<https://www.caloes.ca.gov/PublicSafetyCommunicationsSite/Documents/DashboardInfo.pdf>

- NG911 Deployment PSAP Dashboard

<https://calema.maps.arcgis.com/apps/dashboards/edccc14f232640c4b53a65e946880568>





Next Gen 9-1-1 Deployment



Northern Region
169 PSAPS
7,000,000 Calls / Year



Statewide
All 450 PSAPS
27,000,000 Calls / Year

Los Angeles Region
78 PSAPS
8,000,000 Calls / Year

NGA 911

We are live in Tuolumne County!
Tuolumne County Sheriff with T-Mobile
With transfer capability to:
CHP Merced
CalFire San Andreas
Sonora PD

Central Region
112 PSAPS
5,000,000 Calls / Year

NGA 911

Southern Region
91 PSAPS
7,000,000 Calls / Year





OSP Integration Selective Router Transition

Phase	Selective Router Name	PSAP Region	PSAPs with Circuits
1	EL CENTRO	Southern	5
1	PLACERVILLE NIAGARA	North	6
1	SONORA	Central	4
2	BARSTOW	Southern	14
2	BUNDY	LA	18
2	JACKSON	Central	6
2	LAKEPORT	North	3
2	MARYSVILLE	North	9
2	MILL VALLEY	North	7
2	PALM SPRINGS	Southern	22
2	SANTA CRUZ MAIN	Central	6
2	SEPULVADA	LA	21
2	THOUSAND OAKS	Central	9
2	UKIAH	North	9
3	CHICO	North	23
3	EUREKA	North	10
3	FRESNO MAIN	Central	26
3	HOLLYWOOD	LA	29
3	MADISON	LA	2
3	NORTHRIDGE	LA	2
3	RIALTO	Southern	17
3	RIDGECREST	Central	14
3	San Diego MIRA MESA	Southern	26
3	SAN GABRIEL	LA	44
3	VALLEJO	North	16
3	VISALIA	Central	14
3	WATERMAN	LA	48
3	WESTMINSTER	LA	31

Phase	Selective Router Name	PSAP Region	PSAPs with Circuits
4	LA PUENTE	LA	23
4	LAS POSITAS	Central	13
4	MILLBRAE	North	19
4	MODESTO MAIN	Central	27
4	ORINDA	North	36
4	SAN ANDREAS	Central	7
4	SAN LUIS OBISPO	Central	10
4	SANTA ANA	Southern	35
4	SANTA CLARA	North	26
4	SHERMAN OAKS	LA	23
4	UPTOWN	LA	45
4	VENTURA FIR	Central	11
5	AUBURN	North	18
5	BAKERSFIELD MAIN	Central	18
5	REDDING ENTERPRISE	North	14
5	SACRAMENTO MAIN	North	22
5	SALINAS MAIN	Central	10
5	SANTA ROSA	North	14
5	STOCKTON MAIN	Central	19

Goal is to complete transition by Dec of 2022

Legislative deadline is Dec 2022

Start dates for each phase

- Phase 1 – Nov 2021
- Phase 2 – May 2022
- Phase 3 – Jul 2022
- Phase 4 – Sept 2022
- Phase 5 – Nov 2022



Go-Live Process

1. Solution is Validated in Cal OES NG 9-1-1 Lab (completed)
2. Validation by dispatchers in each of the PSAPS in the transfer cluster that CPE can answer, transfer, and display NG 9-1-1 calls properly
3. PSAP training completed and verified
4. Validation of the PSAP “Alternate Route” process
5. Validation of the trouble ticket and Network Operation Center activities
6. Validation of ability to deliver test calls from carrier
7. Validation of ability to send ANI / ALI or Location data to CAD



Legacy CPE impact to NG 9-1-1 Deployment

- CPE must support the NENA i3 standard as required by contract
- Cal OES purchased NENA i3 “ready” CPE, but lab testing has validated that NENA i3 CPE is not what has been installed at the PSAP
 - The NENA i3 standard has been published since 2016
 - CPE contract was signed in 2017 that included the NENA i3 requirement
 - Initial NG 9-1-1 requirements were delivered to CPE vendors in 2020, with final requirements in Feb 2021
- Testing revealed several gaps that must be addressed
 - CPE vendors had to update software to support NG 9-1-1 call delivery
 - Each PSAP must be individually programmed, tested, and updated
 - Initial PSAP updates required multiple visits and attempts by CPE vendors to interface with NG 9-1-1 system
 - Even with updated software, Legacy CPE cannot meet all NENA i3 requirements
- The NG 9-1-1 service providers (Atos, Lumen, NGA 9-1-1 and Synergem) have put in “work arounds” to ensure that the CA NG 9-1-1 system can interface with your CPE



Legacy CPE Contract Requirements

1. The legacy CPE contract requires CPE vendors to comply with all current and future NENA i3 requirements.
2. The Cal OES NG 9-1-1 solution complies with the standard and does not include any extra “widgets”.
3. The Cal OES NG 9-1-1 solution will be the first fully compliant NENA i3 deployment.
4. Cal OES cannot authorize replacement CPE equipment until the vendors come into compliance with the contract. The CPE vendors on the legacy CPE contract do not have a solution that is compliant with the contract.
5. There is adequate funding to support statewide CPE replacement, once the CPE vendors are compliant with the contract.
6. The legacy CPE contract requires the vendors to maintain the equipment and apply the updates and maintenance needed to support moving the equipment.
7. The vendor is required to maintain the equipment through the entire 7-year contract period, with the ability to support maintenance beyond year 7.



Statewide Cloud-Native CPE

Full NG 9-1-1 requires Cloud-Native CPE

Product	CPE Vendor	Status
Carbyne CHE	Carbyne	Connectivity
Gemma Cloud CPE	Atos	Test Calls
Motorola Cloud	AT&T	Pending Install
Motorola Cloud	Carousel	Pending Install
Motorola Cloud	Frontier	Pending Install
Motorola Cloud	Lumen	Pending Install
Motorola Cloud	Motorola	Connectivity
NGA 911 ACE CHS	NGA 911	Test Calls
Omni 911 Cloud	Lumen	Connectivity
RapidDeploy	AT&T	Pending Install
RapidDeploy	RapidDeploy	Pending Install
Solacom Data Center	Comtech	Pending Install
Viper Cloud	AT&T	Pending Install
Viper Cloud	Intrado	Pending Install
Viper Data Center	AT&T	Pending Install
Viper Data Center	Intrado	Connectivity
Viper Data Center	Lumen	Pending Install
Zetron Data Center	Zetron	Pending Install

Legend
Green: Solution Validated in lab
Yellow: Completed test calls in lab
Orange Establishing connectivity to lab
White: Lab installation not started

Goal is to have 3-5 Native Cloud CPE vendors complete lab testing by March 2022



NG 9-1-1 Text to 9-1-1

- All Over the Top PSAPs will be migrated to RapidDeploy RadiusPlus. Migration has begun!
 - PSAPs will begin transition to the RapidDeploy Over the Top Text to 9-1-1 solution beginning Feb 16, 2022
- All Viper and Vesta Integrated CPE Text to 9-1-1 Solutions will remain integrated
 - PSAPs will begin transition to the Integrated Text to 9-1-1 solution beginning March 17, 2022
- Transition will be completed by June 30, 2022.



Next Gen 9-1-1 Alert and Warning Integration

- Provide a common technology platform that can be used by local agencies to issue alerts and warnings
- Shall be fully integrated with IPAWS (including WEA and EAS) and the California Earthquake Early Warning system.



Next Gen 9-1-1 Alert and Warning Integration

- Shall be fully integrated with the NG 9-1-1 core services
 - Leverage NG 9-1-1 data and information
 - Ensures Alert and Warning database remains current and secure
 - Facilitates developing, implementing and training for best practices to support the statutory requirements outline in SB 833
- Working on providing an updated technology that complies with technical requirements in the contract



Cal OES Alert and Warning Project Point of Contact

- Please provide any feedback to the NG 9-1-1 Alert & Warning Project Manager

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Cal OES Request for Application: Grant funding for HF Communications

- Cal OES has up to \$60k per applicant available for HF Communications
- Funding is available for Sheriffs, Emergency Operations Centers, or Alerting Authorities statewide
- Application deadline is March 1, 2022
- Additional Info:

[https://www.caloes.ca.gov/pages/Grant-Details.aspx?itemID=507&ItemTitle=2021-22%20High%20Frequency%20Communications%20Equipment%20\(FH\)%20Program%20RFA](https://www.caloes.ca.gov/pages/Grant-Details.aspx?itemID=507&ItemTitle=2021-22%20High%20Frequency%20Communications%20Equipment%20(FH)%20Program%20RFA)



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★ Any Questions

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